

We claim:

- 1 1. A method, comprising:
 - 2 examining an MPEG stream;
 - 3 identifying packets in the MPEG stream that are associated with navigation points in a playback of the MPEG stream; and
 - 4 placing information on the identified packets in a navigation database.
- 1 2. The method of claim 1, wherein:
 - 2 examining an MPEG stream includes examining a transport stream.
- 1 3. The method of claim 1, wherein:
 - 2 the navigation database is in a separate file from the MPEG stream.
- 1 4. The method of claim 1, wherein:
 - 2 the navigation database is not encoded in the MPEG stream.
- 1 5. The method of claim 1, wherein:
 - 2 identifying packets includes identifying packets associated with selected presentation times in the playback.
- 1 6. The method of claim 1, wherein:
 - 2 identifying packets includes identifying a packet containing a video I-frame
 - 3 with a presentation time near one of the selected presentation times.

1 7. A method, comprising:
2 retrieving information on specified packets in an MPEG stream from a
3 navigation file that is separate from the MPEG stream; and
4 using the retrieved information to navigate the MPEG stream.

1 8. The method of claim 7, wherein using the retrieved information to navigate
2 includes:

3 identifying a point in the MPEG stream identified by the retrieved information;
4 processing the MPEG stream starting at the point; and
5 presenting at least a portion of the processed MPEG stream.

1 9. The method of claim 8, wherein:
2 presenting includes presenting video data.

1 10. The method of claim 8, wherein:
2 presenting includes presenting audio data.

1 11. The method of claim 8, wherein:
2 identifying a point includes identifying a video I-frame.

1 12. A machine-readable medium having stored thereon instructions, which when
2 executed by at least one processor cause said at least one processor to perform
3 operations comprising:
4 examining an MPEG stream;

5 identifying packets in the MPEG stream that are associated with navigation
6 points in a playback of the MPEG stream; and
7 placing information on the identified packets in a navigation database.

1 13. The medium of claim 12, wherein:
2 examining an MPEG stream includes parsing packets in the MPEG stream.

1 14. The medium of claim 12, wherein:
2 the navigation database is in a separate file from the MPEG stream.

1 15. The medium of claim 12, wherein:
2 the navigation database is not encoded in the MPEG stream.

1 16. The medium of claim 12, wherein:
2 identifying packets includes identifying packets associated with selected
3 presentation times in the playback.

1 17. The medium of claim 12, wherein:
2 identifying packets includes identifying a video I-frame with a presentation time
3 near one of the selected presentation times.

1 18. An apparatus, comprising:
2 a medium to provide an MPEG stream; and

3 an authoring tool coupled to the medium to examine the MPEG stream and to
4 produce navigation information for a navigation file separate from the
5 MPEG stream.

1 19. The apparatus of claim 18, further comprising:
2 a storage device to store the navigation file.

1 20. The apparatus of claim 18, further comprising:
2 a transmission interface to transmit the navigation file.

1 21. The apparatus of claim 18, wherein:
2 the authoring tool includes a processor and a computer program.

1 22. The apparatus of claim 18, wherein:
2 the navigation file includes data identifying specific points in the MPEG stream.

1 23. The apparatus of claim 18, further comprising:
2 a playback component to navigate the MPEG stream based on contents of the
3 navigation file.

1 24. A system, comprising:
2 a encoder to encode digitized video and audio data into packets in an MPEG
3 stream;
4 a navigation generator coupled to the encoder to:
5 examine the MPEG stream;

6 generate navigation information on packets associated with specific
7 presentation points in the MPEG stream; and
8 store the navigation information in a navigation file separate from a file
9 to store the MPEG stream; and
10 a decoder to read and decode portions of the MPEG stream identified by the
11 navigation information.

1 25. The system of claim 24, further comprising:
2 a player to present the decoded portions of the MPEG stream.

1 26. The system of claim 24, wherein:
2 the MPEG stream includes timing information for synchronized presentation of
3 the video and audio data.